

WHAT IS CLAIMED IS:

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1. A method of cutting sheet material comprising the steps of:
 - (a) engaging a first side of the sheet material with a first crack initiator having a high rake angle, the crack initiator extending from a first cutter base having a low rake angle;
 - (b) simultaneously engaging a second side of the sheet material with a second cutter;
 - (c) generating a first crack in the first side of the sheet material with the first crack initiator;
 - (d) engaging the sheet material with the cutter base of the first cutter;
 - (e) further propagating the first crack using the cutter base; and
 - (f) disengaging the first crack initiator of the first cutter.
 2. A method as recited in claim 1 further comprising the step of:
continuing to propagate the crack through to the second side of the sheet material.
 3. A method as recited in claim 1 further comprising the step of:
 - (a) generating a second crack in the second side of the sheet material with the second cutter; and
 - (b) propagating the first crack to intersect with the crack propagating from the second cutter.
 4. A method as recited in claim 1 wherein:
the second cutter includes a second crack initiator extending from a second cutter base.
 5. A method as recited in claim 1 wherein:
the first crack initiator has a height that is greater than a thickness of a protective laminate or coating on the first side of the laminated web structure.

6. A method as recited in claim 4 wherein:
the second crack initiator has a height that is greater than a thickness of a laminate or protective coating on the second side of the laminated web structure.
7. A method as recited in claim 1 wherein:
the high rake angle of the first crack initiator is in the range of from about 30° to about 70°.
8. A method as recited in claim 7 wherein:
the low rake angle of the cutter base of the first cutter is at least about 15° less than the high rake angle of the crack initiator.
9. A method as recited in claim 4 wherein:
the high rake angle of the second crack initiator is in the range of from about 30° to about 70°.
10. A method as recited in claim 8 wherein:
the crack initiator has a relief angle greater than 0° and not more than about 30°.
11. A method as recited in claim 10 wherein:
the cutter base of the first cutter has a relief angle of not more than about 30°.
12. A method as recited in claim 5 wherein:
the first crack initiator includes a relief edge that is either straight or curved.
13. A method as recited in claim 1 wherein:

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the cutter includes a cutter base having a rake edge that is either straight or curved.

14. A method as recited in claim 13 wherein:

the cutter base has a relief edge that is either straight or curved.

15. A method as recited in claim 1 wherein:

the first crack initiator has a height that is greater than a thickness of a protective coating on the first side of the laminated web structure and is at least 15 μm .

16. A method as recited in claim 1 wherein:

the first crack initiator has a height that is greater than a thickness of a protective coating on the first side of the laminated web structure and is at least 20 μm .

17. A method as recited in claim 7 wherein:

the high rake angle of the crack initiator is not less than about 40°.

18. A method as recited in claim 17 wherein:

the high rake angle of the crack initiator is not less than about 45°.

19. An apparatus cutting for cutting sheet material comprising:

(a) a first cutter including a first crack initiator extending from a first cutter base, the first crack initiator having a high rake angle in the range of from about 30° to about 70°, the first cutter base having a low rake angle that is at least about 15° less than the high rake angle of the first crack initiator, the first crack initiator having a height of at least 5 μm , the cutter base having a relief angle that is greater than 0° and less than about 30°; and

(b) a second cutter opposing the first cutter;

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20. An apparatus as recited in claim 19 wherein:
the second cutter includes a second crack initiator extending from a
second cutter base.
21. An apparatus as recited in claim 19 wherein:
the first crack initiator has a relief angle of not more than about 30°.
22. An apparatus as recited in claim 21 wherein:
the first crack initiator includes a relief edge that is either straight or
curved.
23. An apparatus as recited in claim 21 wherein:
the cutter includes a cutter base having a rake edge that is either straight or
curved.
24. An apparatus as recited in claim 23 wherein:
the first cutter base has a relief edge that is either straight or curved.
25. An apparatus as recited in claim 19 wherein:
the high rake angle in the range of from about 40° to about 70°.
26. An apparatus as recited in claim 19 wherein:
the high rake angle in the range of from about 45° to about 70°.
27. An apparatus as recited in claim 19 wherein:
the first crack initiator has a height of at least 15 μm .
28. An apparatus as recited in claim 19 wherein:
the first crack initiator has a height of at least 20 μm .

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